

NEWS

Geological Society of Minnesota

MINNEAPOLIS, MINNESOTA



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RETURN REQUESTED

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SLIDES AVAILABLE

ON GLACIERS AND SAND DUNES

Marcia Gunville, working for the Minnesota Geological Survey, has prepared two slide programs on the geology of Minnesota for use in earth science classes. Although no slide program can teach as much, or be as memorable, as a well-conducted field trip, the slides can bring some of Minnesota's geology into the classroom. It is hoped that they will stimulate interest in the local geology near where the students live.

Titled "Land that Glaciers Built," one of these deals with the glacial origin of such landforms as moraines, lakes and outwash plains, and the composition of types of glacial drift. Examples are largely from the Twin Cities Metropolitan Area, but the slides include several of glaciers in the Arctic and Antarctic.

The second program, titled "Dunes of the Anoka Sand Plain," was prepared as a sequel to the first program, although it can be shown alone. It describes the origin of the sand plain, which covers most of the area from near St. Cloud to near the St. Croix River and southward to the Mississippi. The process of dune building by wind erosion and deposition is illustrated. Examples are mostly from Bunker Hills Park Reserve near Coon Rapids, but a few slides of dunes in Antarctica and of eolian sandstone in Arizona are also included.

A third program on the development of the Mississippi and Minnesota Rivers is in preparation, but will not be ready before late summer. There is a possibility that one on the Red River Valley may be prepared in cooperation with the North Dakota Geological Survey during the summer.

The slides may be rented by anyone for a modest fee. Inquire of Minnesota Geological Survey (612)373-3372.

*HERE IS THE INFORMATION FOR THE
BANQUET:

MONDAY, APRIL 28, 6:30 P.M.
 FAIR OAK HOTEL, 2335 3rd AVE. S.

- BUS PAST DOOR (9B), AVAILABLE ON 6th ST.
 DOWNTOWN MINNEAPOLIS, 3 PARKING LOTS.

ROAST TURKEY
DINNER

\$7.50

INCLUDES...
 MEAL, TIP, TAX
 AND DONATION TO
 GUESTS' MEALS.

SPEAKER...

**JERRY WEBERS &
 SLIDES OF ANARCTICA**

ACT NOW

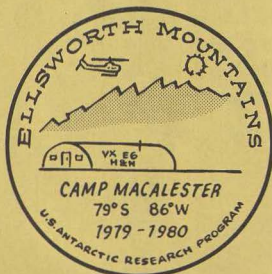
Make your reservations

Make your reservations by Monday,
 April 21

Send checks to Dorothy Jefferies
 9509 Fifth Ave. S.
 Bloomington, Minn.
 phone 888-1274 35430

GUESTS ARE WELCOME

SEE YOU THERE



WORKSHOP

Thirty members, many of them more recent joiners, took part in an interesting workshop on Saturday March 29th at the Van Cleve Park Recreation Center, Como and 15th Ave. S.E., Minneapolis.

Six presentations made up an outstanding program prepared by a committee chaired by Sr. Joan Kain.

Mary Minball outlined how rocks are classified and laid out her extensive rock collection for all to inspect.

Gary Gaynor of Minneapolis who makes models of mineral crystals for the Minnesota Science Museum explained several of his intricate examples.

The geological history of North America was strikingly shown in "This Land", an excellent 40-minute film made by Shell Oil Company.

Next was Robinson's fascinating talk on the hows and whys of radioactive dating, now a main way to measure geological time.

Bob Curville's detailed talk on the geology of the western U.S., was beautifully illustrated with his own slides. He and Marsha have taken many pictures on field trips, including G.S.M.'s trip to Yellowstone and Grand Teton National Parks in 1975.

Finally, Barbara Gudmundson gave a short talk on maps and how to read them.

G.S.M. workshops have been held from time to time, the last in 1976. We are not able to announce this year's workshop in the winter Newsletter. However, announcements were made at four winter lectures, and members who had not attended those meetings were called by phone.



FIELD TRIPS

This will be an exciting summer of field trips. The geologic history of this area is very long and complex, and we will have four opportunities to learn about rocks of vastly different ages. Plans are now being made for the trips described below. Final dates and arrangements will be announced as information becomes available. A complete schedule will be published in the June newsletter.



1. Duluth through Northern Wisconsin to Upper Michigan, with Dr. Richard Ojakangas (U. of M., Duluth), two days by bus.
We will stand astride the great Douglas Fault separating the Late Precambrian sandstones from the igneous rocks present in the rift zone of those times. We will travel through Wisconsin and Upper Michigan examining the corollaries of Minnesota rock types. We will head on to the Ironwood-Wakefield, Michigan region, and head northward to Lake Superior. Dr. Ojakangas has worked with the U.S. Geological Survey in this area, and knows it well. We know him from a previous trip as an excellent teacher and field trip leader.
2. Cambrian and Ordovician Sedimentary Formations from Taylor's Falls to Rochester with Dr. Gerald Webers (Macalester College), one day by car.
Dr. Webers will review with us the Paleozoic rocks laid down here about 500 million years ago as seas kept advancing and retreating over our area. During this period, shallow-water life forms were evolving rapidly under warm, tropical seas. Dr. Webers is a paleontologist who is well qualified to help us understand the episodes forming the sedimentary rocks of our area. He has led field trips and given lectures to us many times, and is one of the best. We look forward to this outing with him.

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GUESS WHAT--

"No material extracted from the earth is put to a wider variety of uses than CLAY. And no material except PLINT has been used longer in human history", Sydney Harris column Feb. 12. St. Paul Pioneer Press.

MEET THE BOARD

BARBARA GUORUNSON President

Became interested in geology as a child in Tennessee where rock outcrops were common. Her main interest is in geomorphology. She is a student of Dr. William Girard at Mankato State University.

At present she is a private consultant in ecology, and has degrees in zoology, biology, and botany and water resources. She specializes in river and plant ecology; and is listed in Who's Who in American Women.

HENRY CAGLE, Vice President, is an engineer with the Honeywell Corporation. He attended Queens College in New York and Manchester Institute of Technology, England, served in the Army Corps of Engineers during WW II and has an active interest in politics. His interest in G.S.M. was spurred by a rock show at Brookdale in 1974. He has been a member ever since.

ROBERT HANDSCHIN Secretary

Served as president in 1979. Emilie and Bob joined the Society in 1972 after having enjoyed Gerry Weber's lecture series on historical geology. Bob is retired after working as an economist for Farmers Union Grain Terminal Association.

He thinks geology is the most interesting hobby going.

VIRGINIA BAKER Director

Ms. Baker is a native of Massachusetts who has lived in Southwest Minneapolis since 1966 and has been interested in geology since childhood.

She joined G.S.M. in 1977 to explore the subject on a more formal level. Of her three sons, Warren, 13, often comes to lectures and shares his mother's enthusiasm for rock collecting.



IN MEMORIAM

MYRTLE FORE, a board member and active committee leader for G.S.M. was killed on Christmas eve in an auto accident on a western Minnesota road. She taught Home Economics at Highland Park Junior High, St. Paul, and contributed to G.S.M. on Hospitality Committee, etc. She is survived by husband, Earl, also a G.S.M. member who likes to take pictures on our field trips.

MRS. HELENE BECKER died March 18 at age 94 at her home in the Wilder Center, St. Paul. She was a long time member of the Society and had been a mathematics teacher at Murray High School. She was an active member, attending lectures and going on field trips as long as her health permitted.

MIKE VACLAVEK, long time G.S.M. member, died in December at age 85. He and his widow, Cora, were active in the Minnesota Mineral Club before his retirement in 1964 when they joined G.S.M. In that year they were on our field trip to the New York World's Fair.

FIELD TRIPS (CONTINUED).

3. St. Cloud and Surrounding Areas with Dr. G.B. Morey (Minnesota Geological Survey), one day by car.

Dr. Morey is an expert in the Middle and Late Precambrian geology of East Central Minnesota. He began developing the story of this area for us last summer when he led a G.S.M. field trip to see the Thomson slate, Nopeming sandstone, basalt of the Duluth Complex, and the Fond du Lac formation. His enthusiasm for these rocks, his knowledge about them, and his skill in explaining the complex events underlying their formation, made us anxious to see more of the area with him. This year we will go on to study the Middle Precambrian "highlands", the granites of the St. Cloud area so widely used as building stones. How were these beautiful rocks formed? When did they become positive land features, and where did their erosional sediments go? How have these rocks affected subsequent Minnesota terrains. G.B. Morey, with his deep understanding of these rocks, is an ideal person to show them to us.

4. Glacial Geology of the Minneapolis - St. Paul Area, with Dr. Joseph E. Goebel (Minnesota Geological Survey), one day by bus.

The Minneapolis - St. Paul area is a crossroads of multiple glaciation. Our present topography, the hills and valleys, outwash plains, stream channels, and lakes resulted from the presence of glaciers here. From local field evidence, we can reconstruct the movements of the last two ice sheets in this area, the Superior Lobe from the east and the Des Moines Lobe from the west. The landforms they left behind have influenced the history of man in this area. We will have an opportunity to learn more about the glacial features we see every day.

Sign up sheets will be posted at the last two lectures and at the Spring Banquet. Your name must be on these lists if you want more information about individual trips. Signing up does not commit you to go, but indicates that you would like to be called before each trip. If you cannot sign up at meetings, contact Bob Gunville (574-1421) to make sure you are included.

EDITORIAL

Production of the newsletter has been fraught with many difficulties.

The deadline for copy was not met. In the meantime the editor had to have surgery, then to find a typist and an available electric typewriter.

Finally a typewriter was found and a friend from the Unitarian Society agreed to type. After being laid out and sent to the printers the letters have to be assembled, addressed and stamped. It would be nice if members could do some of the typing so I wouldn't have to ask friends who are non-members.

Criticism and many thanks to the following assistants.

Lorraine Madison, Mickey Foley, and Nancy Balaban - typing; Jim Erickson, artist & lay out; Bob Handschin, writing articles, assembling & mailing; Lowry Hill West Neighborhood Association for lending electric typewriter.

ANTARCTICA SUMMER RESEARCH

Antarctica seems to be a favorite wintering spot of some U.S. researchers; those months that bring snow and ice to the United States are the only months of relative warmth in the southernmost continent. This year, about 300 U.S. researchers will take advantage of the austral summer to conduct a variety of projects during the 25th year of the National Science Foundation-funded U.S. Antarctic Program.

The largest of the 80-odd investigations scheduled for the season is the first leg of a four-year study of the Ellsworth Mountains, a 220-mile long, 50-mile-wide north-south range located between the West Antarctica plateau and the Ronne Ice Shelf. The mountains mark a tectonic boundary between geologically younger West Antarctica and older East Antarctica. Under the direction of geologist Gerard F. Webers of Macalester College in St. Paul, Minn., the researchers will try to determine what role the mountains may have had in the break-up of the super-continent Gondwanaland and the formation of America. To that end, the project will include a search for fossil plants and animals (which may furnish reliable dates for the geologic history of Antarctica and its relationship to other continents) and a survey for radioactive elements (part of an ongoing study by University of Kansas geologists, which may reveal something of the geologic structure).

Other projects include:

A study of the sediments near Taylor Valley - one of the ice-free regions, located at the boundary of McMurdo Sound and the Transantarctic Mountains - in order to determine if those mountains are an active or inactive plate boundary between East and West Antarctica.

A continuing study of the movements and behavior of marine animals, especially Weddell seals and the antarctic cod.

An experiment in which researchers will generate very low frequency signals in order to study the relationship between such electromagnetic waves and the precipitation of charged particles from the earth's radiation belts.

A study of antarctic sea ice by buoy and by ice thickness measurements in order to examine the interaction of sea ice, ocean circulation and atmospheric circulation.

A commemorative flight of an LC-130 airplane using the same route taken by Admiral Richard E. Byrd and colleagues to mark the 50th anniversary of that first flight over the South Pole.

From "Science News" - Oct. 13, 1979 issue.